

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for optimizing the use of data transmission resources ~~between terminals in a telecommunication system and a network element in the telecommunication system~~, the method comprising:

forming an end-to-end connection between a ~~first one of the terminals in the terminal in a telecommunication system and a second one of the terminals another party of the end-to-end connection~~, the end-to-end connection including a first connection part between the ~~first terminal and the terminal and a network element in the telecommunications system~~ and a second connection part between the network element and the ~~second terminal other party~~,

monitoring the end-to-end connection to detect an event indicating a difference ~~in an allocated capacity between the first and second connection parts of the end to end connection, the difference in the allocated capacity being between a capacity of the first connection part and a capacity allocated to of the second connection part~~,

defining an extent of a detected event,

checking whether an extent of the detected event ~~fulfills~~ fulfills a predetermined condition, and

if the condition is fulfilled, changing the capacity allocated to the first connection part from data transmission resources in such a manner that a difference ~~in an allocated capacity between the capacities of~~ first and second connection parts decreases.

2. (Previously Presented) The method of claim 1, wherein the monitoring, defining, checking and changing are performed separately for an uplink and a downlink direction of the connection.

3. (Currently Amended) The method of claim 1, wherein the monitoring, defining and checking are performed separately for an uplink and a downlink direction of the connection, and the method further comprises upgrading the ~~allocated capacity between~~

capacity of the first and second connection parts if the extent of the event of either the uplink direction or the downlink direction fulfills the predetermined condition.

4. (Currently Amended) The method of claim 1, wherein the monitoring, defining, checking and changing are performed separately for an uplink and a downlink direction of the connection, and the method further comprises downgrading the ~~allocated capacity between~~ capacity of the first and second connection parts when the predetermined condition relating to a downgrade is fulfilled in both the uplink and downlink directions.

5. (Currently Amended) The method of claim 4, wherein the downgrading includes downgrading the ~~allocated capacity between~~ capacity of the first and second connection parts by a smaller downgrade amount allowed if a downgrade amount allowed by the uplink side is a different downgrade amount from a downgrade amount allowed by the downlink side.

6. (Currently Amended) The method of claim 1, wherein the event indicating the difference ~~in the allocated capacity between~~ capacities of the first and second connection parts is a transmission of padding, and the extent of the event is defined by measuring the amount of the padding to be transmitted.

7. (Currently Amended) The method of claim 1, wherein the event indicating the difference ~~in the allocated capacity between~~ capacities of the first and second connection parts is a need for flow control, and the extent of the event is defined by detecting a duration of the flow control.

8. (Currently Amended) The method of claim 1, wherein the event indicating the difference ~~in the allocated capacity between~~ capacities of the first and second connection parts is buffering, and the extent of the event is defined by detecting a filling degree or filling rate of the buffer.

9. (Currently Amended) The method of claim 1, wherein the event indicating the difference ~~in the allocated capacity between~~ capacities of the first and second connection parts is information received from the other connection part on the party on an allocated

capacity thereof and wherein the extent of the event is defined at least partially based on a difference in the allocated capacity expressed by the information.

10. (Previously Presented) The method of claim 1, wherein the telecommunication system is a mobile communication system and the data transmission resources are resources on an air interface.

11. (Currently Amended) A method for optimizing the use of resources on an air interface between a mobile station in a mobile communication system and a communication network in a data call between the mobile station and ~~a terminal in the communication network another part of the data call~~, the method comprising:

forming an end-to-end connection including a first leg between the mobile station and ~~an interworking unit a network element~~ in the mobile communication system and a second leg between the ~~interworking unit~~ network element of the mobile communication system and the ~~terminal~~ other party,

maintaining information indicating a capacity of the first leg on the air interface,

receiving information indicating a capacity of the second leg,

comparing the capacities of the first and second legs with each other,

if the capacities differ from each other, changing the capacity of the first leg on the air interface to correspond to the capacity of the second leg.

12. (Previously Presented) The method of claim 11, further comprising transmitting capacity change information associated with the first leg to the second leg.

13. (Previously Presented) A method of claim 11, further comprising:  
transmitting information indicating an intention to change the capacity of the first leg to the second leg,

receiving information indicating whether the second leg is capable of a capacity change corresponding to the intended capacity change of the first leg, and

changing the capacity of the first leg when the second leg is capable of the corresponding capacity change.

14. (Currently Amended) A method of claim 11, further comprising:  
receiving information indicating an intention to upgrade the capacity of the second  
leg,

checking the available capacity of the ~~second~~ first leg,

~~if there is at least a predetermined minimum amount of capacity available in the  
second leg,~~ transmitting information to the second leg indicating that the capacity of the  
second leg can be upgraded when at least ~~a predetermined minimum~~ an amount of capacity  
corresponding to the intended capacity change of the second leg is available in the first leg,  
and

if there is not a predetermined minimum an amount of capacity corresponding to the  
intended capacity change of the second leg available in the ~~second~~ first leg, transmitting  
information to the second leg indicating that the capacity of the second leg is not allowed to  
be upgraded.

15. (Currently Amended) A mobile communication system comprising:  
a plurality of mobile stations including a first mobile station and a second mobile  
station,  
~~a mobile communication network configured to establish and maintain a connection  
between the first and second mobile stations,~~  
an air interface between the first and second mobile stations and the mobile  
communication network-system, and  
a first network element configured to form a first leg of the connection between the  
first mobile station and the first network element, the first network element being configured  
to allocate capacity to the first leg from the air interface, and  
a second network element configured to form the second leg between the second  
mobile station and the second network element, the second network element being configured  
to allocate capacity to the second leg from the air interface,  
wherein the first network element is configured to maintain information on the  
capacity allocated to the first leg from the air interface, receive information on the capacity of  
the second leg, compare the capacities of the first and second legs with each other and change  
the capacity of the first leg to correspond to the capacity of the second leg based on a  
difference between the capacities of the first and second legs, and the second network

element is configured to transmit information associated with the capacity of the second leg to the first network element.

16. (Previously Presented) The mobile communication system of claim 15, wherein the second network element is configured to transmit information associated with the capacity of the second leg to the first network element in response to a capacity change of the second leg.

17. (Previously Presented) A mobile communication system of claim 15, wherein the first network element is configured to inquire of the second network element whether the capacity of the second leg can be changed and configured to change the capacity of the first leg only if the capacity of the second network element can be changed, and wherein the second network element is configured to receive the inquiry relating to changing the capacity of the second leg and to transmit information associated with potential capacity change of the second leg in response to the inquiry relating to changing the capacity.

18. (Previously Presented) A mobile communication system of claim 15, wherein the first network element and the second network element are the same network element and are arranged to convey information associated with a capacity of the first and second legs as internal information of the network element.

19. (Currently Amended) An interworking unit of A network element for a telecommunication network, the network element comprising:  
~~a network element including an interworking function;~~  
~~wherein the network element is and being~~ configured to (i) monitor a connection between a terminal in connection with the telecommunication network and a second party, (ii) detect an event indicating a difference ~~in capacity between a capacity of a~~ first connection part between the terminal and the interworking unit and ~~a capacity of a~~ second connection part between the second party and the interworking unit, (iii) define an extent of the event and (iv) change capacity allocated to the connection from data transmission resources between the telecommunication network and the terminals when the extent of the event fulfills a predetermined condition.

20. (Currently Amended) The interworking unit network element of claim 19, wherein the network element is further configured to monitor, detect, define and change the allocated capacity between of the first and second connection parts separately for uplink and the downlink directions of the connection.

21. (Currently Amended) The interworking unit network element of claim 19, wherein the network element is further configured to monitor, detect and define an uplink and downlink direction of the connection separately and to increase the allocated capacity of the terminal if a predetermined condition relating to an upgrade of the capacity is fulfilled in either the uplink or downlink direction and to decrease the capacity of the terminal only if a predetermined condition relating to a downgrade of the capacity is fulfilled in both the uplink and downlink directions.

22. (Currently Amended) The interworking unit network element of claim 19 wherein the network element is an interworking unit of the mobile communication network and the data transmission resources are resources on the air interface.

23. (Previously Presented) The method of claim 11, further comprising:  
receiving information from the second leg associated with the intention to upgrade the capacity of the second leg,  
checking the available capacity of the second leg, and  
transmitting information to the second leg indicating that the capacity of the second leg is not allowed to be upgraded when at least a predetermined minimum amount of capacity is not available.

24. (New) The network element of claim 19, wherein the network element is an interworking unit.